

WHAT IS CLAIMED IS:

1. A method of controlling a driver circuit of an LCD device, wherein the driver circuit comprises a plurality of data drivers and at least two gate drivers, the data drivers are connected to data lines, the gate drivers are connected to gate lines, an overlapping area of a data line and a gate line defines a pixel of the LCD device, the data drivers applies driving voltages corresponding to a line of picture image onto a scan line of pixels through the data lines, and the gate drivers turn on the gate lines by asserting gate driving signals onto the gate lines so that the scan lines of pixels are displayed, comprising:

selecting a first gate driver from the at least two gate drivers based on a selection rule, wherein the first gate driver sequentially turns on a pre-determined range of gate lines starting from a gate line A and, thereby, a part of a picture image is displayed on the LCD device; and

selecting a second gate driver from the at least two gate drivers based on the selection rule, wherein the second gate driver simultaneously turns on the pre-determined range of gate lines starting from a gate line B that is separated from the gate line A by a pre-determined gap of gate lines and, thereby, a part of a special image whose corresponding driving voltages are of a specific target value.
2. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein the selection rule determines a gate driver as the first gate driver if driving voltages output by the data drivers correspond to a part of a picture image and the gate driver is used to display the part of a picture image represented by the driving voltages.

3. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein the selection rule determines a gate driver as the second gate driver if driving voltages output by the data drivers are of a specific target value and correspond to a part of a specific image and the gate driver is used to display the part of a specific image represented by the driving voltages of the target value.
4. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein the gate lines are distributed among the gate drivers so that each of the gate drivers are connected to a fixed number of gate lines.
5. The method of controlling a driver circuit of an LCD device according to Claim 4, wherein the pre-determined range of gate lines is equal or greater the said fixed number of gate lines.
6. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein the data drivers can receive a reset signal from a reset line and, when that happens, all data registers of the data drivers are reset to have a specific content so that the driving voltages output by the data drivers are of the target value.
7. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein the data drivers can receive a preset signal from a preset line and, when that happens, all data registers of the data drivers are preset to have a specific content so that the driving voltages output by the data drivers are of the target value.
8. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein a switch can be placed between a data line and a data driver and, when a driving voltage output from a digital-to-analog converter inside the data

driver corresponds to a part of a picture image, the switch allows the driving voltage to pass onto the data line.

9. The method of controlling a driver circuit of an LCD device according to Claim 1, wherein a switch can be placed between a data line and a data driver and, when a driving voltage of the target value is required on the data line, the switch takes the driving voltage directly from a target value line and pass the voltage onto the data line, instead of taking an output from the data driver.